JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- Oct 2017

B.Tech/ 1st Semester

COURSE CODE: 13B21CI121   MAX. MARKS: 25

COURSE NAME: Introduction to Computers and Basic Programming

COURSE CREDITS: 4   MAX. TIME: One Hour Thirty Minutes

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means. ·

1. Write a program to design a calculator with basic operations using switch case statement.

(3.5 marks)

2. Make a flowchart for the following problem statement: (3 marks)

The marks obtained by a student in 5 different subjects are input through the keyboard.
The student gets a division as per the following rules:
Percentage above or equal to 60 - First division
Percentage between 50 and 59 - Second division
Percentage between 40 and 49 - Third division
Percentage less than 40 – Fail
Calculate the division obtained by the student.

3. Write a program to find the number of times an element has occurred in one dimensional array.

(3 marks)

4. Make a flowchart to calculate the sum and product of all elements of an array.   (3 marks)

5. Write a program to print half pyramid using numbers: (3 marks)

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

6. Write a program with functions returning the value of the HCF and LCM of two numbers

entered by the user.   (3.5 marks)

7. Make a flowchart to print all even numbers from 1 to 100 using while loop.   (3 marks)

(P.T.O)

8. (i) Point out error if any in the following code: (1 mark)

```
main( )
{
  int size ;
  scanf ( "%d", &size ) ;
  int arr[size] ;
    for ( i = 1 ; i <= size ; i++ )
      {
        scanf ( "%d", arr[i] ) ;
        printf ( "%d", arr[i] ) ;
      }
}
```

(ii) Point out error if any in the following code: (1 mark)

```
main( )
      {
      int i = 135, a = 135, k ;
      k = pass ( i, a ) ;
      printf ( "\n%d", k ) ;
      }
      pass ( int j, int b )
      int c ;
      {
      c = j + b ;
      return ( c ) ;
      }
```

(iii) What will be the output of the following code: (1 mark)

```
main( )
  {
    int x = 1 ;
    while ( x == 1 )
    x = x - 1 ;
    printf ( "\n%d", x ) ;
  }
```